MAXWELL JONES

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EDUCATION

***Carnegie Mellon University**, Pittsburgh, PA* — ***Expected Graduation:* May 2023**
Bachelor of Science in Artificial Intelligence — GPA: 4.0/4.0
Additional Major in Mathematics

***Thomas Jefferson High School for Science and Technology**, Alexandria, VA* — **2015-2019**
High School Diploma — GPA: 4.1/5.0

PROJECTS

Walksafe | CMU TartanHacks — **February 2020**
- Developed a Python program on team of 4 that calculates safe and efficient walking paths at night in New York City.
- Created a weighted graph from crime and street data and implemented an A* algorithm to generate optimal paths.
- Integrated Open Street Map API and fetched data from NYPD crime database REST endpoint.

Football Predictions with Linear Algebra — **December 2019**
- Used Massey and Keener mathematical models to predict NFL playoff outcomes given regular season data.
- Implemented models with Jupyter Notebook and Julia and accurately predicted super bowl winner in 2009.

Origami Social Network — **August 2018-May2019**
- Developed a Node.js application that allows origamists to connect with each other and share their work
- Implemented user accounts, used MD5 hashing to safely store passwords, added cookies to store login data.
- Created a Python program to allow users to design and store crease patterns of their models.

Othello Game AI — **January 2018**
- Coded an algorithm that plays Othello against a human using a heuristic and negamax to find new moves.

EXPERIENCE

***Data Science Intern* | Fiat Chrysler Automobiles** — **Summer 2020**
- Optimized the HR absentee prediction model in Python resulting in a 2% increase in accuracy.
- Improved neural network performance by cross referencing crew attendance across plants.
- Queried data from PostgreSQL database and used Pandas dataframe library to store query results.

***Teaching Assistant* | 15-151 Concepts in Mathematics for Computer Scientists** — **Fall 2020-Present**
- Teach 20-student recitation twice per week and help create problems for homework and tests.
- Host weekly office hours, grade homework and exams, and attend weekly staff meetings.

SKILLS

Programming: Python, Java, C, SQL, Julia, JavaScript, HTML, Latex

Tools/Frameworks: Sklearn, Keras, NumPy, Jupyter Notebook, Pandas, Git, Unix Command Line

Coursework: 15-213 Computer Systems, 15-251 Great Theoretical Ideas in Computer Science, 15-150 Functional Programming, 15-122 Principles of Imperative Computation, 21-325 Probability Theory, 21-260 Differential Equations, 15-151 Concepts in Mathematics, 21-241 Matrix Algebra, 21-259 Calculus III.

INVOLVEMENT

Treasurer for SPIRIT, CMU Black Student Organization, Origami Club Officer, CMU SCS Social Media Ambassador, Club Basketball, Kappa Sigma Fraternity.